

Remarks

Applicants hereby adds new claims 36-37. Accordingly, claims 1-3, 6-7, 9-10, 12-13, 15-16, 18-22, 24, and 26-37 are pending in the present application. Support for the new claims may be found at least at page 6 lines 1-31 of the specification.

The Examiner has objected to claims 15, 21, and 27.

Claims 3, 32, and 33 stand rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement.

Claims 13 and 30 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-2, 13, 19-21, 30, and 32-33 stand rejected under 35 USC §103(a) as being unpatentable over "Mobile Robot Survival" by Fred R. Sias & Frank Heckendorn (hereinafter "Sias"). Claims 3 and 15 stand rejected under 35 USC §103(a) as being unpatentable over Sias in view of US Patent Application Publication 2004/0249519 to Frink (hereinafter "Frink"). Claims 5-6, 16, and 18 stand rejected under 35 USC §103(a) as being unpatentable over Sias in view of US Patent 6,459,955 to Bartsch et al. (hereinafter "Bartsch"). Claims 7, 9, and 31 stand rejected under 35 USC §103(a) as being unpatentable over Sias in view of "The Ominous Mail Delivery Robot" (hereinafter "Mail").

Claims 10, 12, and 34 stand rejected under 35 USC §103(a) as being unpatentable over Sias in view of Mail and Bartsch. Claims 22, 24, and 35 stand rejected under 35 USC §103(a) as being unpatentable over Sias in view of "A System for Semi-Autonomous Tractor Operations" by Stentz et al. (hereinafter "Stentz"). Claims 25-26 stand rejected under 35 USC §103(a) as being unpatentable over Sias in view of US Patent 6,377,875 to Schwaerzler (hereinafter "Schwaerzler"). Claim 27 stands rejected under 35 USC §103(a) as being unpatentable over Sias in view of Schwaerzler and Stentz. Claim 28 stands rejected under 35 USC §103(a) as being unpatentable over Sias in view of Mail, Bartsch, and Stentz.

Applicants respectfully request reconsideration of the objections and rejections.

Regarding the objections

Claims 15, 21, and 27 have been amended herewith to address the objections. In particular, claim 27 has been amended to include language suggested by the Examiner. Accordingly, Applicants respectfully request that the objections to claims 15, 21, and 27 be withdrawn.

Regarding the §112 1st paragraph rejections

In rejecting claims 3, 32, and 33, the Examiner asserts that the specification does not describe an instance in which a surrogate loiters. Applicants respectfully disagree.

As defined by the Random House Unabridged Dictionary (copy attached), loiter means to “to linger aimlessly or as if aimless in or about a place.” Thus, the term loiter is broad enough to include both lingering in a place and lingering about a place. Remaining stationary in a location, then, falls under the definition of loiter since remaining stationary in a location is equivalent to lingering in a place.

At page 6, lines 5-9, the specification discloses a surrogate halting (i.e., remaining stationary) near a location where unsuitable degradation was detected. Based on the above discussion of the meaning of loiter, this portion of the specification discloses the surrogate loitering near the location because remaining stationary near the location falls within the definition of loitering near the location. Accordingly, this portion of the specification provides §112 1st paragraph support for claims 3, 32, and 33 since it discloses an instance of loitering near a location where the unsuitable degradation was detected.

Applicants respectfully request withdrawal of the §112 1st paragraph rejections of claims 3, 32, and 33 for the above-mentioned compelling reasons.

Regarding the §112 2^d paragraph rejections

Claims 13 and 30 have been amended herewith to address the antecedent basis issues identified by the Examiner. Accordingly, Applicants respectfully request that the §112 2^d paragraph rejections of claims 13 and 30 be withdrawn.

Regarding claim 1

Claim 1 has been amended to include limitations previously recited by canceled claim 25. In particular, claim 1 recites *wherein the detecting comprises comparing a performance parameter associated with the wireless communications with a threshold*.

The Examiner relies on the teachings of col. 3 lines 35-40 of Schwaerzler as allegedly teaching the limitations of claim 25 (which has now been incorporated into claim 1). This portion of Schwaerzler, however does not disclose a threshold. Furthermore, the cited portion of Schwaerzler discloses capabilities of a recognition sensor in a situation in which there is loss of radio contact. Accordingly, the cited portion of Schwaerzler does not disclose comparing a performance parameter associated with wireless communications of wireless control that are degraded, but are still being received by a surrogate.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art even if the teachings of Sias are combined with the teachings of Schwaerzler and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 1 for the above-mentioned compelling reasons.

The claims that depend from claim 1 are in condition for allowance for at least the reasons discussed above with respect to the independent claim.

Regarding claim 7

Claim 7 has been amended to recite *prior to the autonomously moving the surrogate, determining that the loss of the wireless control has persisted for the period of time*.

Applicants respectfully assert that neither Sias nor Mail disclose the above-recited limitations of claim 7. Sias describes a robot that can retrace its immediate past movement to re-connect a radio or microwave link that has been lost, but does not disclose determining that loss of wireless control has persisted for a period of time prior to autonomously moving the surrogate as recited by claim 7.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art even if the teachings of Sias are combined with the teachings of Mail and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 7 for the above-mentioned compelling reasons.

The claims that depend from claim 7 are in condition for allowance for at least the reasons discussed above with respect to the independent claim.

Claim 13 recites limitations similar to claim 7 and is allowable for at least the reasons described above in relation to claim 7. The claims that depend from claim 13 are in condition for allowance for at least the reasons discussed above with respect to claim 13.

Regarding claim 19

Claim 19 recites *a computer/transceiver system configured to move the surrogate to an area not currently receiving adequate coverage of the wireless control, but in which the surrogate previously experienced adequate coverage of the wireless control, and wait in the area until adequate coverage of the wireless control is regained.*

Sias discloses a robot that can retrace its immediate past movement to re-connect a radio or microwave control link, but does not disclose that the robot *moves to an area not currently receiving adequate coverage of the wireless control and waiting in the area until adequate coverage of the wireless control is regained* as recited by claim 19.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by Sias and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 19 for the above-mentioned compelling reasons.

The claims that depend from claim 19 are in condition for allowance for at least the reasons discussed above with respect to the independent claim.

Regarding claim 3

Claim 3 recites *loitering near a location where the unsuitable degradation was detected.*

The Examiner cites teachings of paragraph 21 of Frink as allegedly teaching the above-recited limitations. Frink discloses a model airplane under remote control. In the case of loss of transmitter power, the model airplane is directed to a predetermined safe area where the model airplane may be forced into a predetermined loiter pattern.

Frink does not disclose that the model airplane loiters near a location where transmitter power is lost. Instead, the model airplane is directed to a predetermined

safe area. Accordingly, Frink does not disclose loitering near a location where unsuitable degradation was detected as recited by claim 3.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art even if the teachings of Sias are combined with the teachings of Frink and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 3 for the above-mentioned compelling reasons.

Claims 30 and 32 recite limitations similar to claim 3 and are allowable for at least the reasons described above in relation to claim 3.

Regarding claim 26

Claim 26 recites *the detecting comprises determining that a current non-zero data rate at which the surrogate is successfully transmitting data via the wireless communications is less than a desired data rate.*

The Examiner relies on the teachings of col. 3 lines 44-45 of Schwaerzler as allegedly teaching the limitations of claim 26. This portion of Schwaerzler, however, does not disclose a data rate. Col. 3 lines 35-40 of Schwaerzler discloses capabilities of a recognition sensor of a UAV in a situation in which there is loss of radio contact. In the scenario disclosed in this portion of Schwaerzler, a UAV is not successfully transmitting data via wireless communications because the UAV is out of radio contact. This portion also discloses an interference signal having unreadable modulation. The UAV does not successfully transmit data via the interference signal. Accordingly, this portion of Schwaerzler does not disclose a current non-zero data rate at which a surrogate is successfully transmitting data via wireless communications as recited by claim 26.

The Examiner asserts that the modulation of the interference signal disclosed by Schwaerzler is a measure of bandwidth. Schwaerzler, however, does not disclose a measure of bandwidth associated with the modulation, let alone a data rate. Furthermore, the modulation disclosed by Schwaerzler is modulation of an interference signal not modulation of wireless communications via which a surrogate is successfully transmitting data. Accordingly, this modulation taught by Schwaerzler does not disclose either the *current non-zero data rate* or the *desired data rate* recited by claim 26.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art even if the teachings of Sias are combined with the teachings of Schwaerzler and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 26 for the above-mentioned compelling reasons.

Regarding claim 28

Claim 28 recites *the surrogate sensing removal of the obstacle*.

The Examiner relies on teachings of page 90 of Stentz as teaching the above-recited limitations of claim 28. Stentz discloses a tractor that detects and obstacle in its path and transmits an image to a human operator. However, this portion of Stentz, however, does not disclose that the tractor senses removal of the obstacle. Instead, a human operator looks at the image to determine if an obstacle is present or if an obstacle has moved out of the way.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art even if the teachings of Sias and Schwaerzler are combined with the teachings of Stentz and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 28 for the above-mentioned compelling reasons.

Regarding claim 34

Claim 34 recites *automatically without user intervention resuming backtracking*.

In the most recent office action, the Examiner does not provide a prima facie case for the rejection of the above-recited limitations of claim 34. Instead, the Examiner appears to rely on the prima facie case for the rejection of claim 10, which is based on Bartsch, as also disclosing the limitations of claim 34.

Bartsch, however, does not disclose stopping a surrogate for an obstacle and resuming backtracking of the surrogate after removal of the obstacle, let alone that the backtracking is resumed automatically without user intervention. Bartsch discloses sensing an obstacle while travelling along a path, moving around the obstacle, recording a deviation from the path required to get around the obstacle,

and then calculating a new vector to be used to get back on the path. Bartsch does not suggest stopping and waiting for the obstacle to be removed.

In rejecting other claims (e.g., claim 28), the Examiner relies on page 90 of Stentz as allegedly teaching sensing removal of an obstacle and resuming backtracking responsive to the sensing. On page 90, Stentz discloses a tractor detecting an obstacle in its path and transmitting an image to a human operator. If the operator disagrees about the presence of an obstacle, or if the obstacle has moved out of the way, the operator signals the tractor to resume. Accordingly, the tractor does not resume automatically without user intervention. Instead, the tractor relies on user intervention to resume. Accordingly, Stentz does not teach *automatically and without user intervention backtracking* as recited by claim 34.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art even if the teachings of Sias, Stentz and Mail are combined with the teachings of Bartsch and Applicants respectfully submit the §103(a) rejection is in error for at least this reason.

Applicants respectfully request withdrawal of the §103(a) rejection of claim 34 for the above-mentioned compelling reasons.

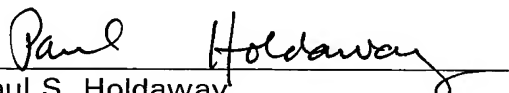
Claim 35 recites limitation similar to claim 34 and is allowable for at least the reasons described above in relation to claim 34.

Applicants respectfully request allowance of all pending claims.

The Examiner is requested to telephone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,
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Date: 13 Nov 2009